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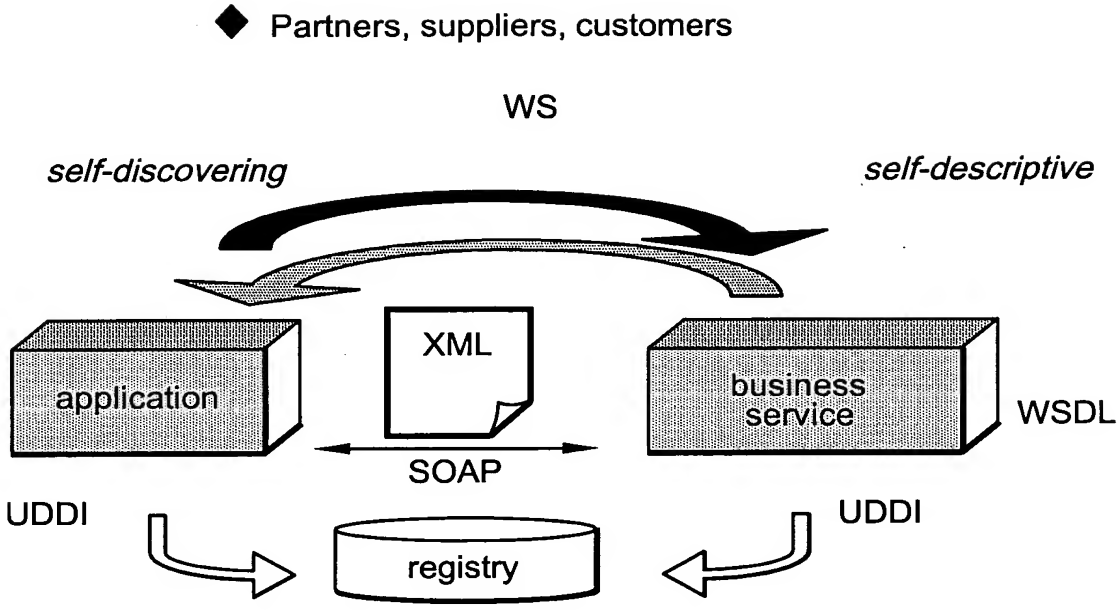
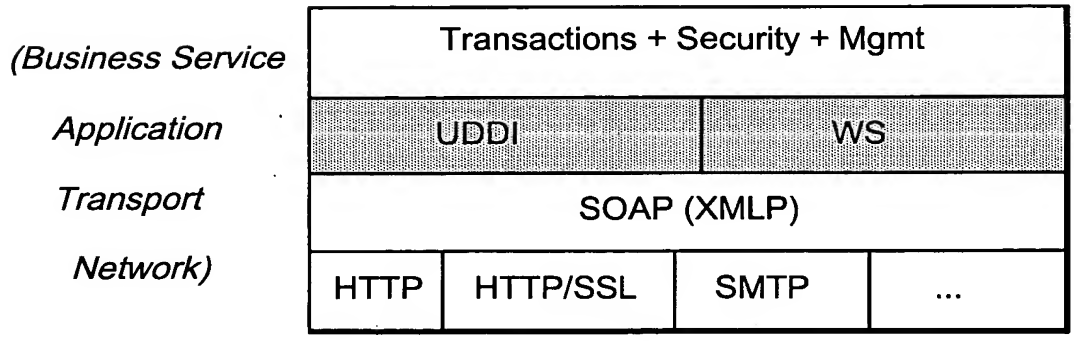
PATENT & TRADEMARK OFFICE



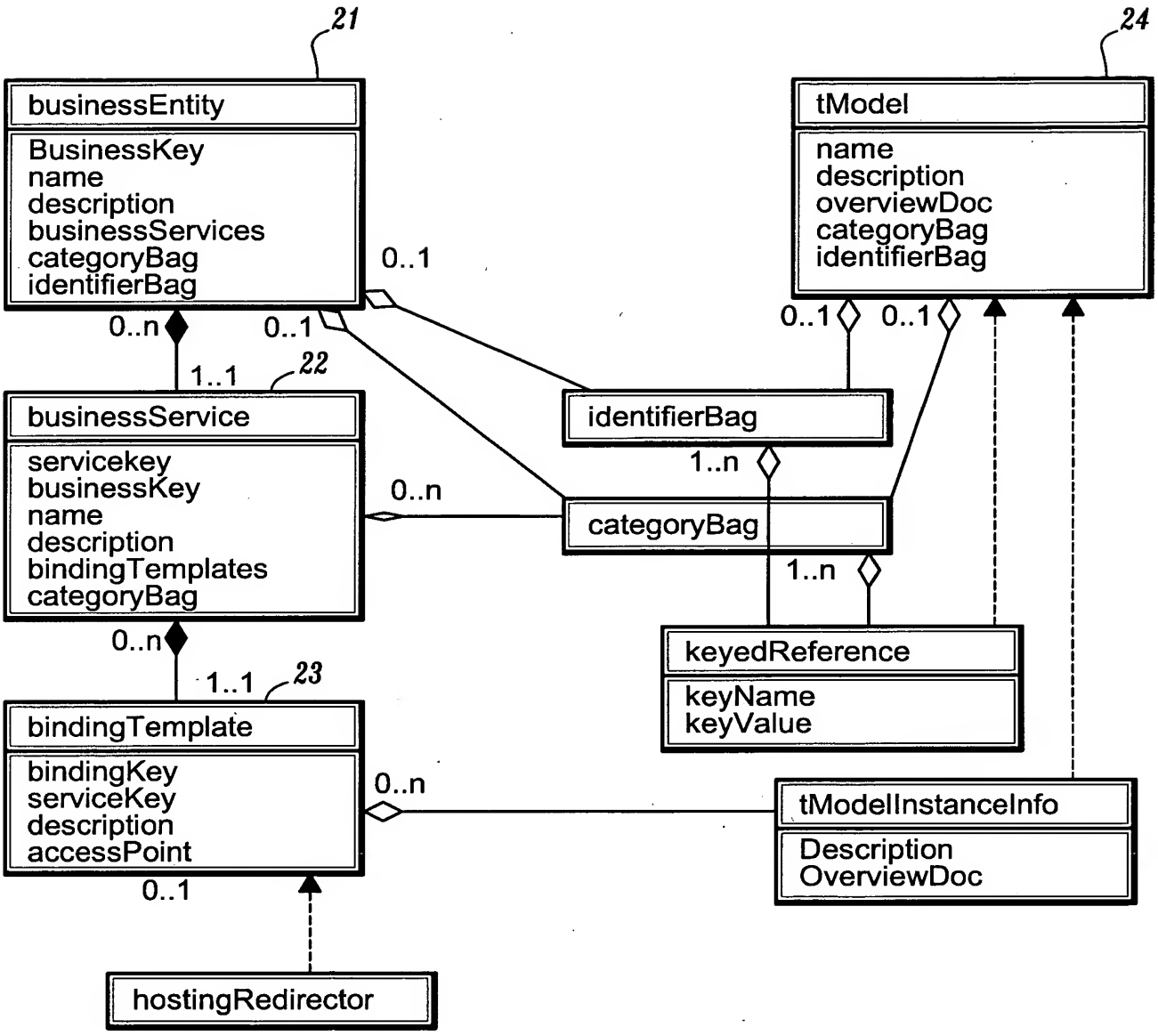

Web Services Related Art

**FIG. 1a**



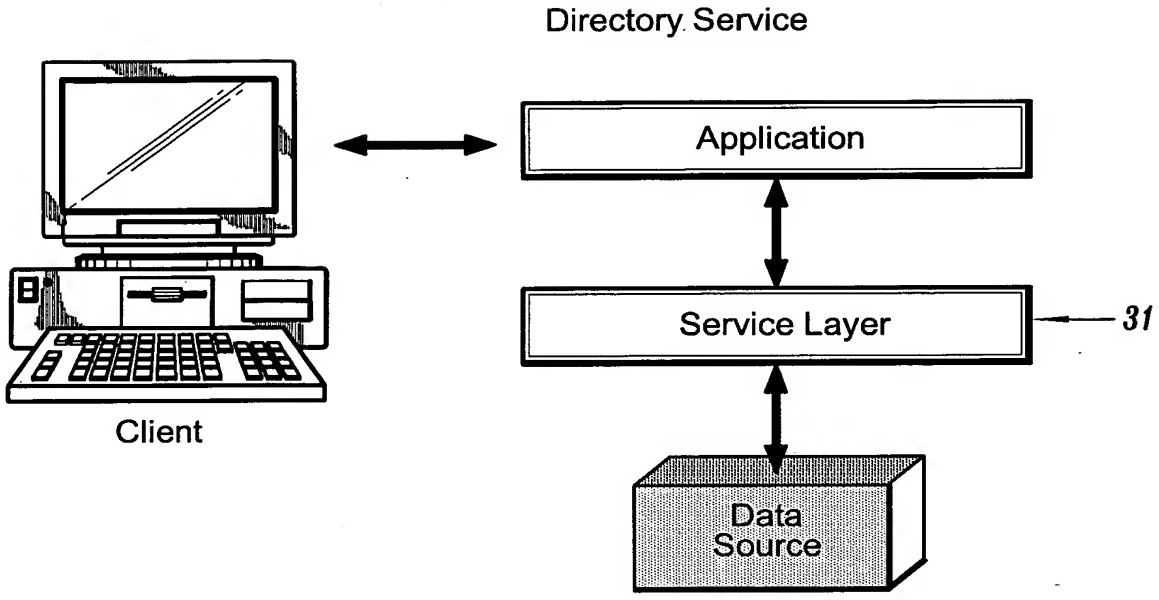

WS Protocol Stack Related Art

**FIG. 1b**




Related Art

**FIG. 2**




Related Art

**FIG. 3**

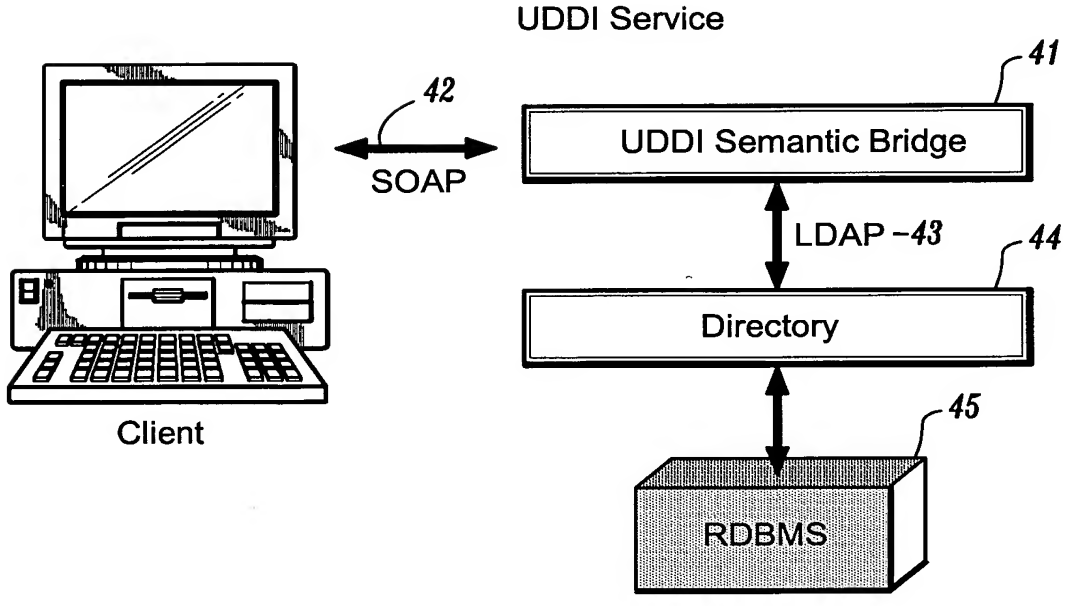



**FIG. 4**

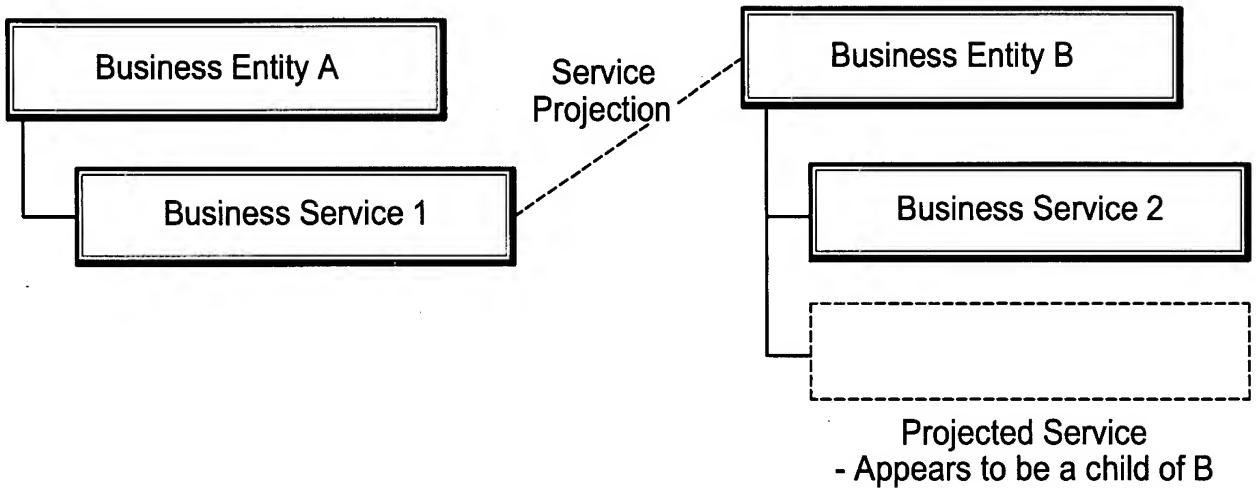
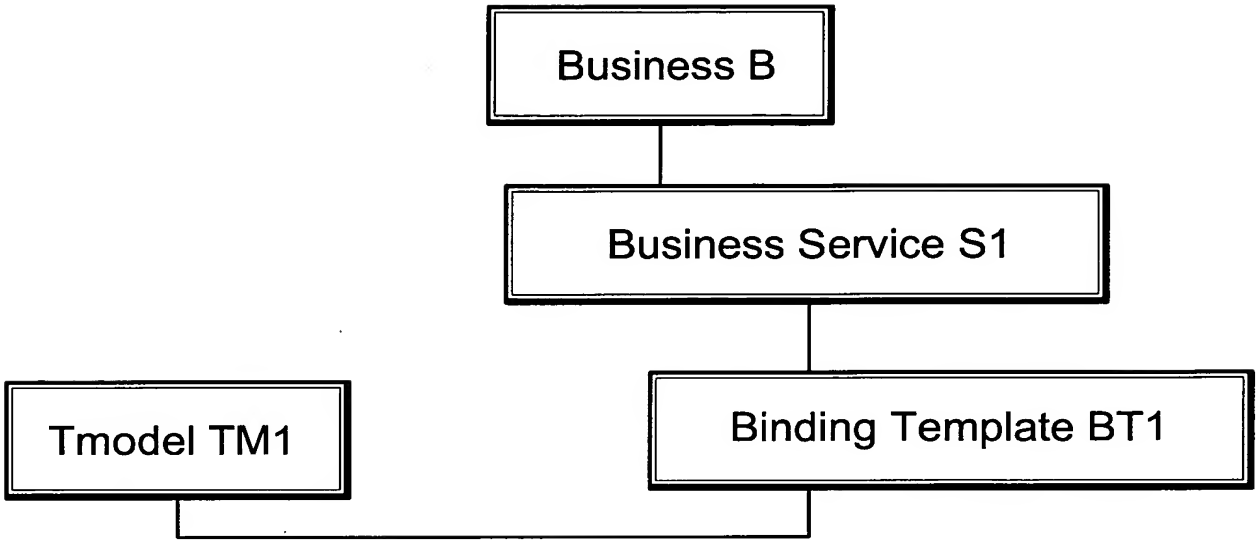
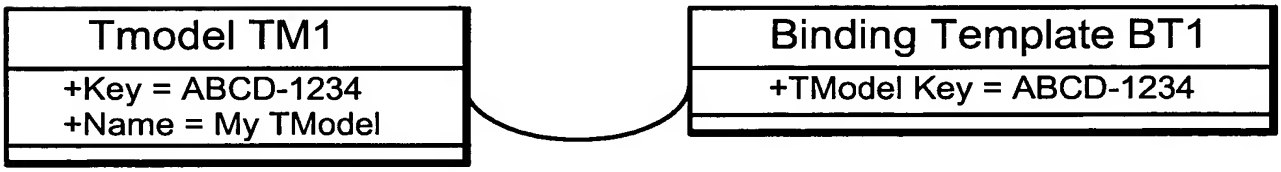

Business Entity A
Business Service 1
Service
Projection
Business Entity B
Business Service 2
Projected Service
- Appears to be a child of B

FIG. 5




Binding Template/Tmodel relationship

**FIG. 6**




Primary & Foreign Keys

**FIG. 7**

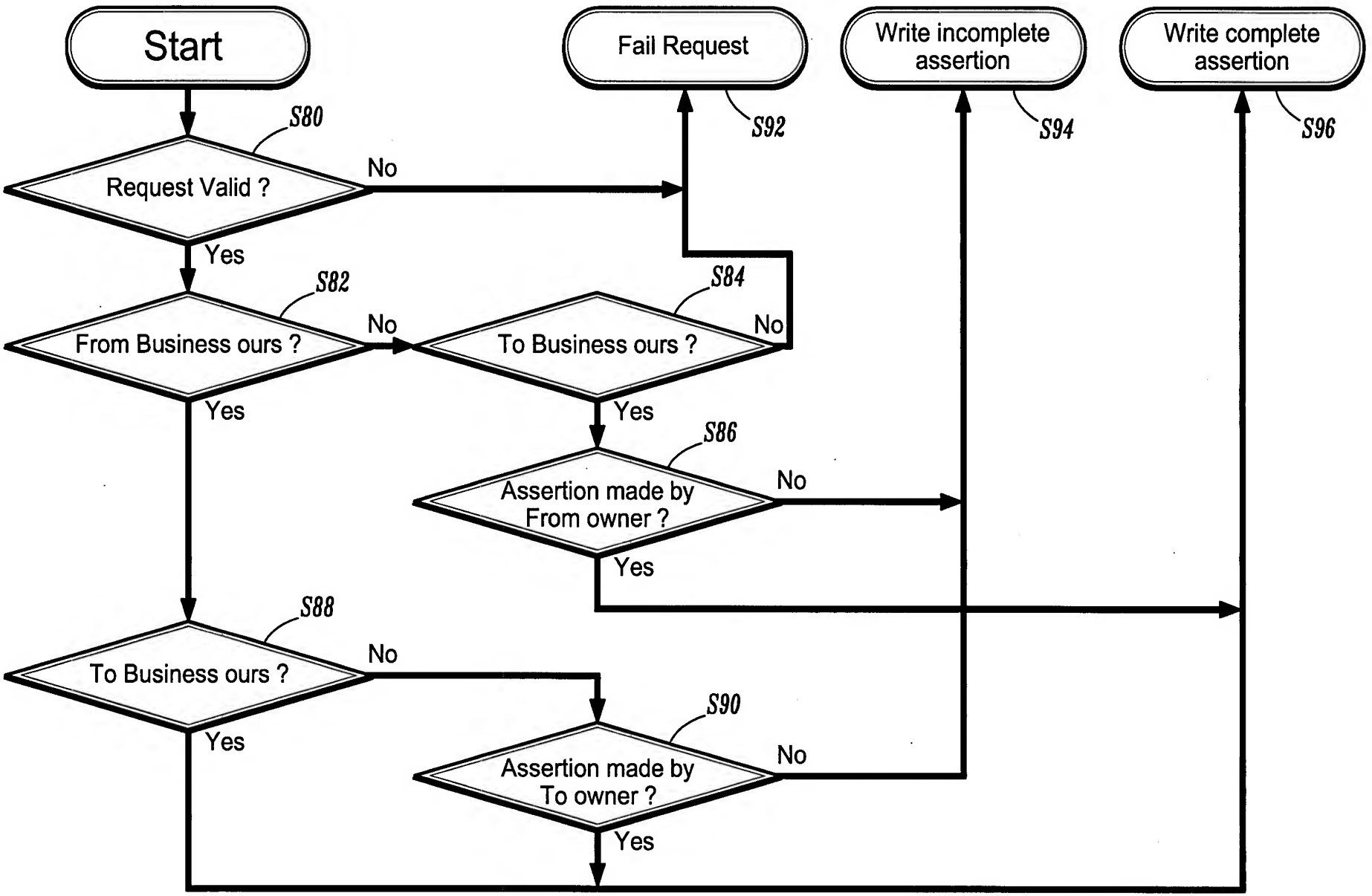

Start
Fail Request
Write incomplete assertion
Write complete assertion
S80
Request Valid ?
No
Yes
S92
S94
S96
S82
From Business ours ?
No
Yes
S84
To Business ours ?
No
Yes
S86
Assertion made by From owner ?
No
Yes
S88
To Business ours ?
No
Yes
S90
Assertion made by To owner ?
No
Yes

FIG. 8

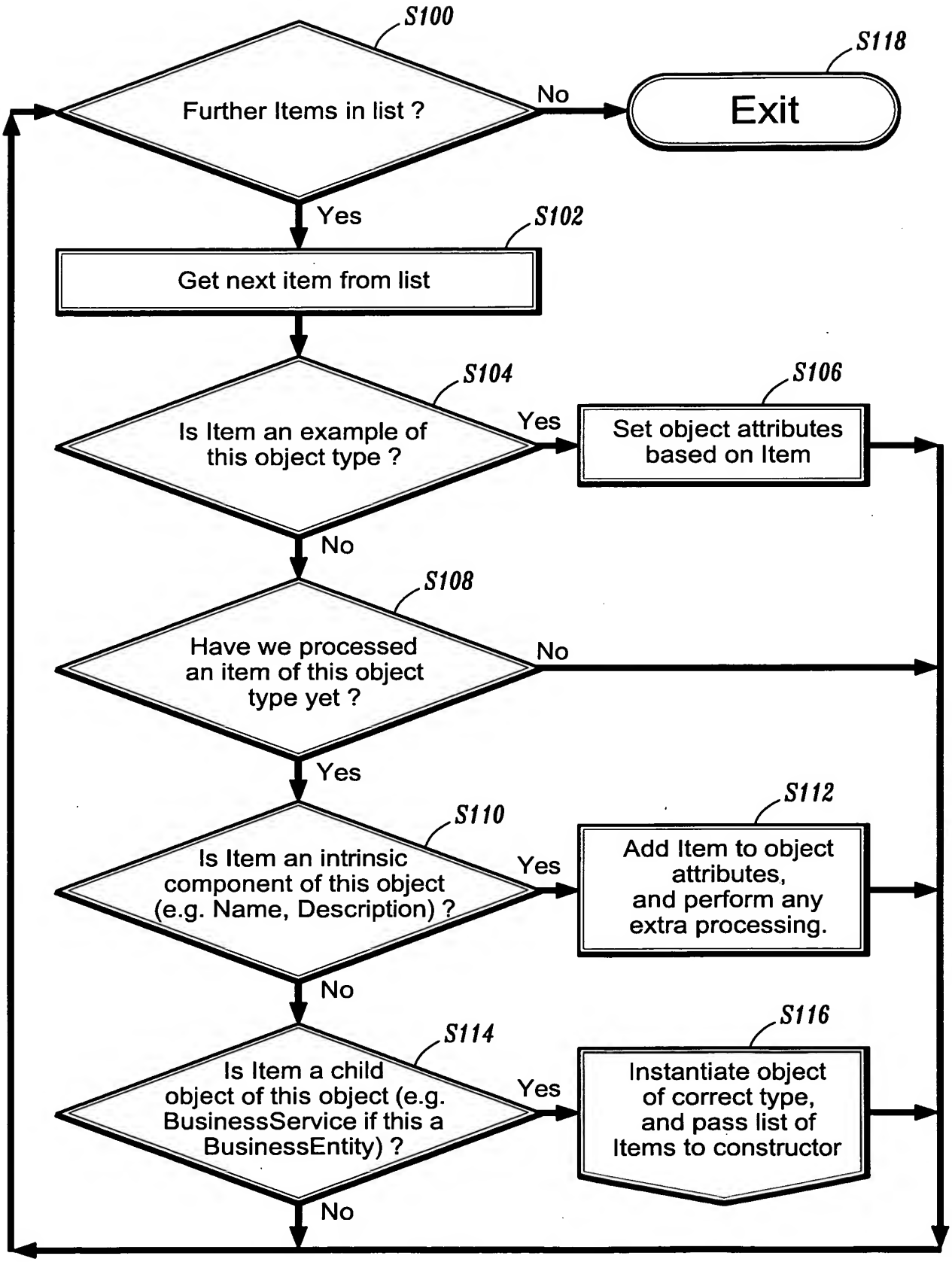

S100
Further Items in list ?
No
S118
Exit
Yes
S102
Get next item from list
S104
Is Item an example of this object type ?
Yes
S106
Set object attributes based on Item
No
S108
Have we processed an item of this object type yet ?
No
Yes
S110
Is Item an intrinsic component of this object (e.g. Name, Description) ?
Yes
S112
Add Item to object attributes, and perform any extra processing.
No
S114
Is Item a child object of this object (e.g. BusinessService if this a BusinessEntity) ?
Yes
S116
Instantiate object of correct type, and pass list of Items to constructor
No

FIG. 9

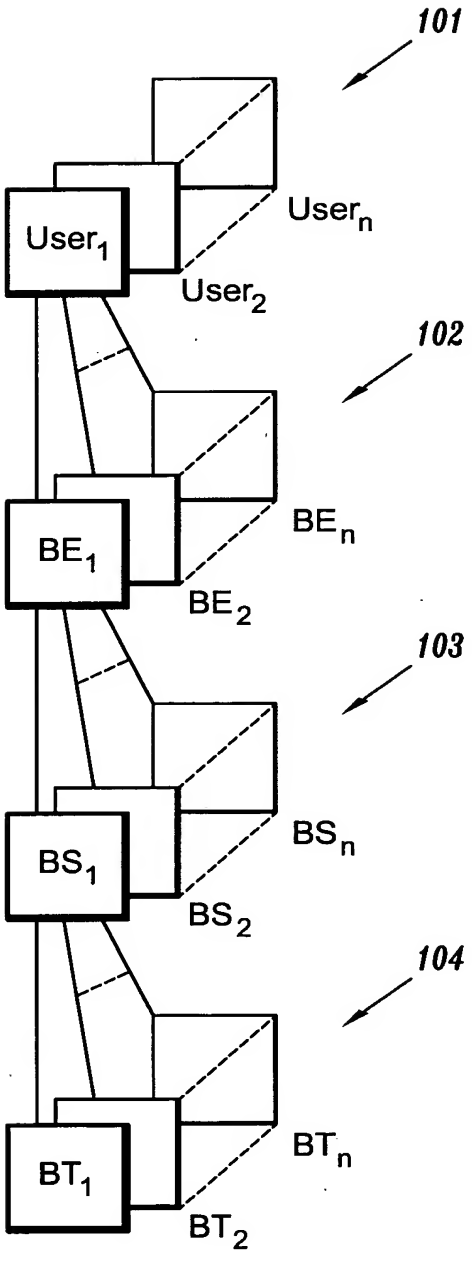

101
User1
Usern
User2
102
BE1
BEn
BE2
103
BS1
BSn
BS2
104
BT1
BTn
BT2

FIG. 10

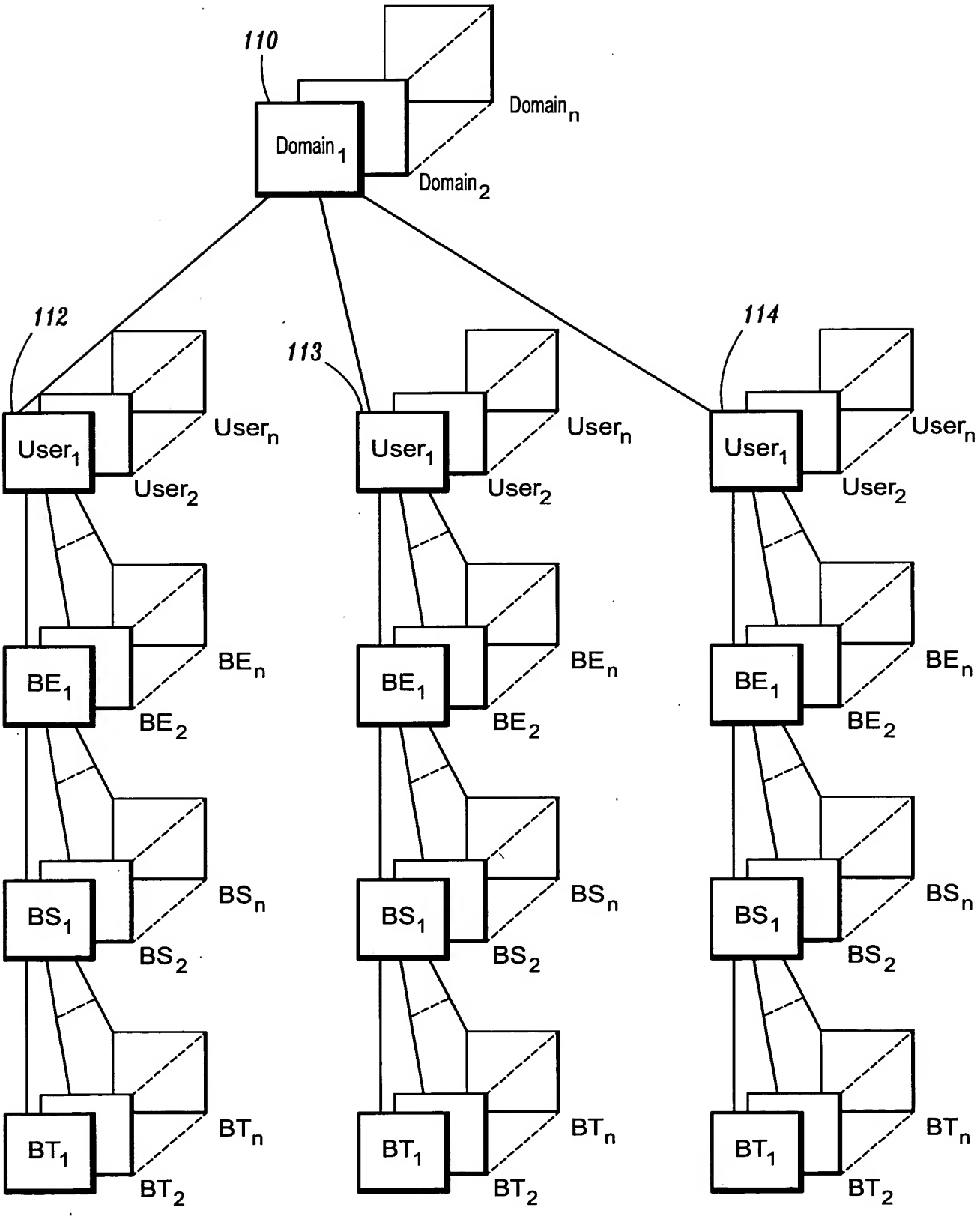

110
Domain$_1$
Domain$_2$
Domain$_n$
112
113
114
User$_1$
User$_2$
User$_n$
BE$_1$
BE$_2$
BE$_n$
BS$_1$
BS$_2$
BS$_n$
BT$_1$
BT$_2$
BT$_n$

FIG. 11

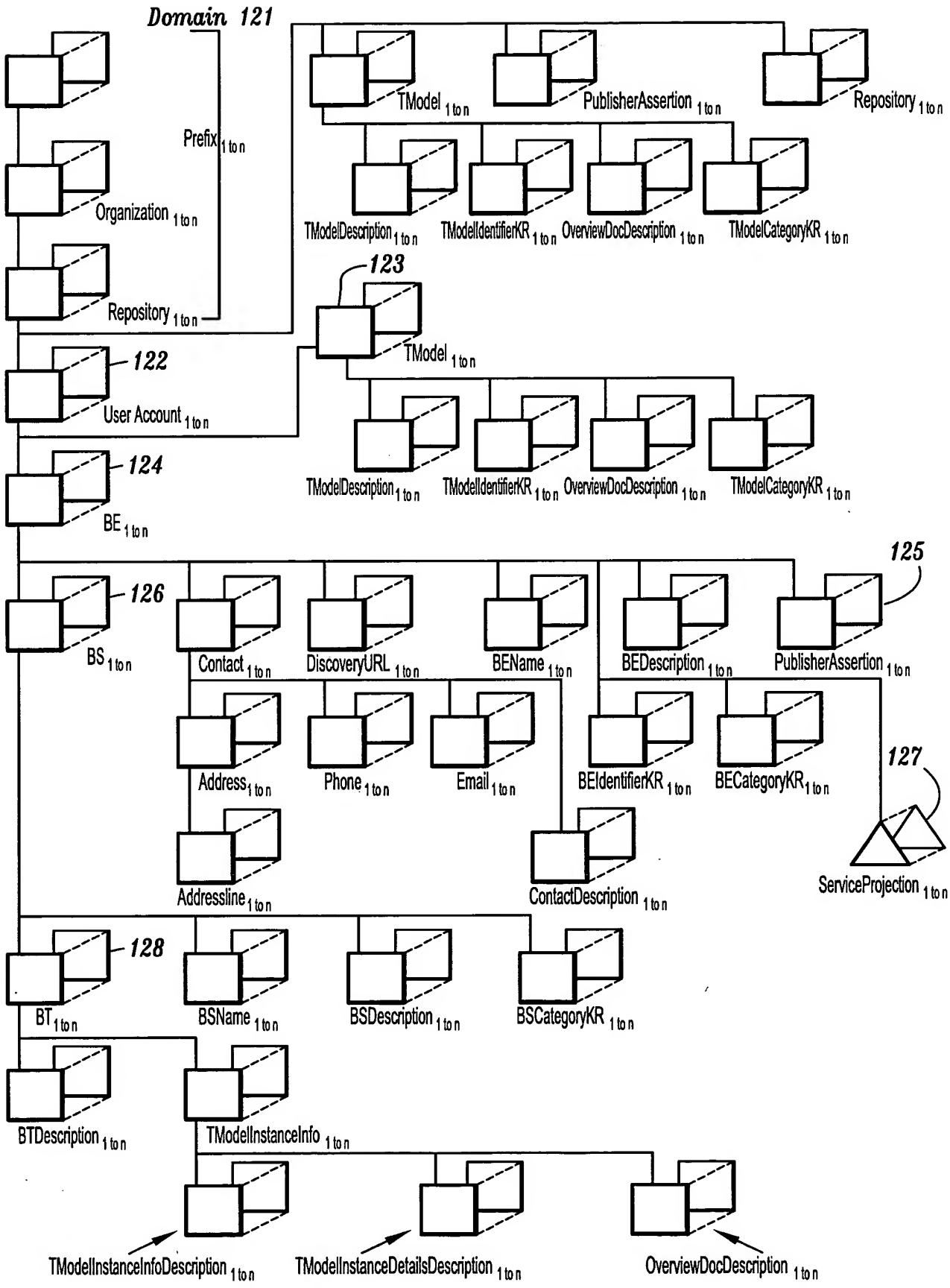
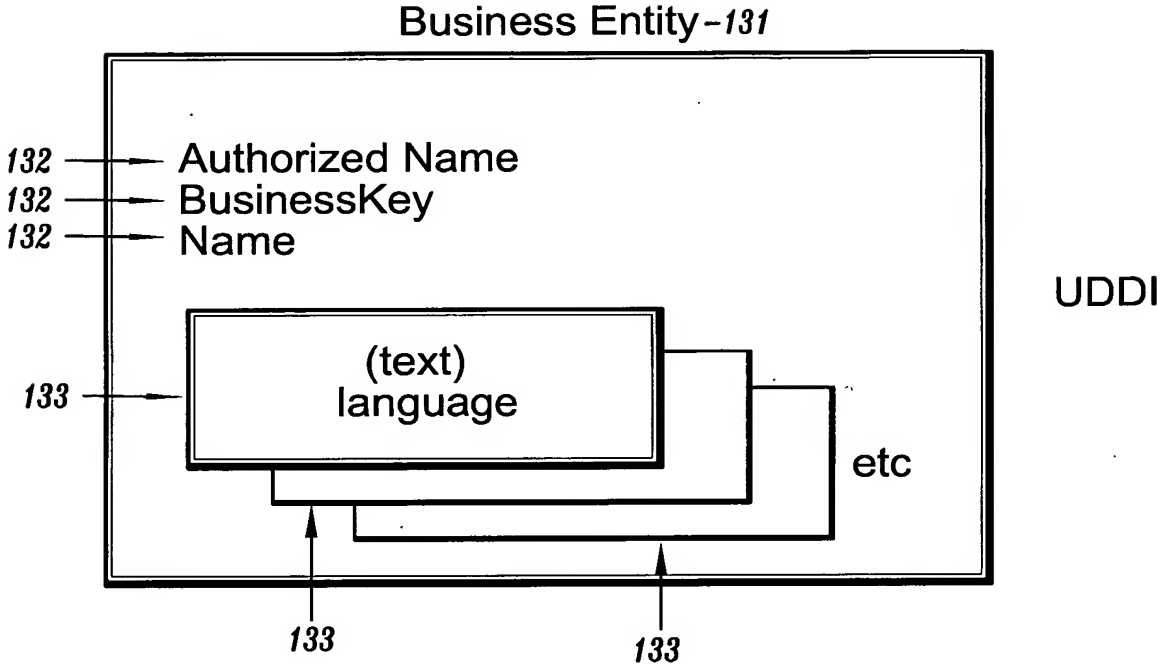
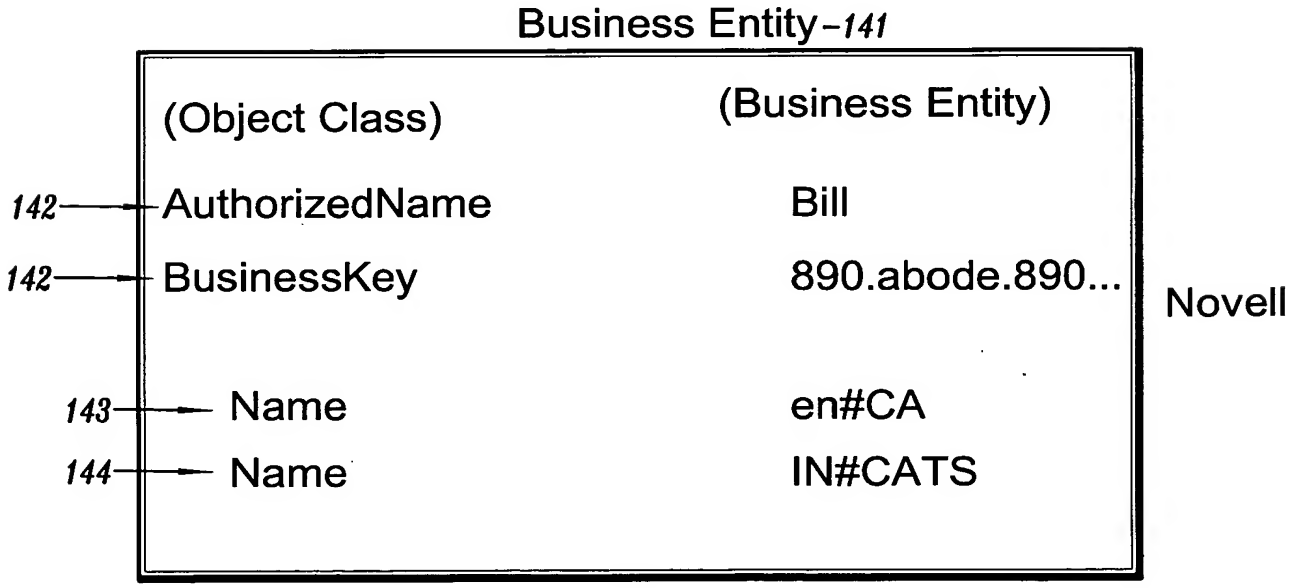

Domain 121
Prefix 1 to n
Organization 1 to n
Repository 1 to n
TModel 1 to n
PublisherAssertion 1 to n
Repository 1 to n
TModelDescription 1 to n
TModelIdentifierKR 1 to n
OverviewDocDescription 1 to n
TModelCategoryKR 1 to n
123
TModel 1 to n
122
User Account 1 to n
TModelDescription 1 to n
TModelIdentifierKR 1 to n
OverviewDocDescription 1 to n
TModelCategoryKR 1 to n
124
BE 1 to n
125
126
BS 1 to n
Contact 1 to n
DiscoveryURL 1 to n
BEName 1 to n
BEDescription 1 to n
PublisherAssertion 1 to n
Address 1 to n
Phone 1 to n
Email 1 to n
BEIdentifierKR 1 to n
BECategoryKR 1 to n
127
Addressline 1 to n
ContactDescription 1 to n
ServiceProjection 1 to n
128
BT 1 to n
BSName 1 to n
BSDescription 1 to n
BSCategoryKR 1 to n
BTDescription 1 to n
TModelInstanceInfo 1 to n
TModelInstanceInfoDescription 1 to n
TModelInstanceDetailsDescription 1 to n
OverviewDocDescription 1 to n

FIG. 12




**(Prior Art)**

**FIG. 13**




**(Prior Art)**

**FIG. 14**

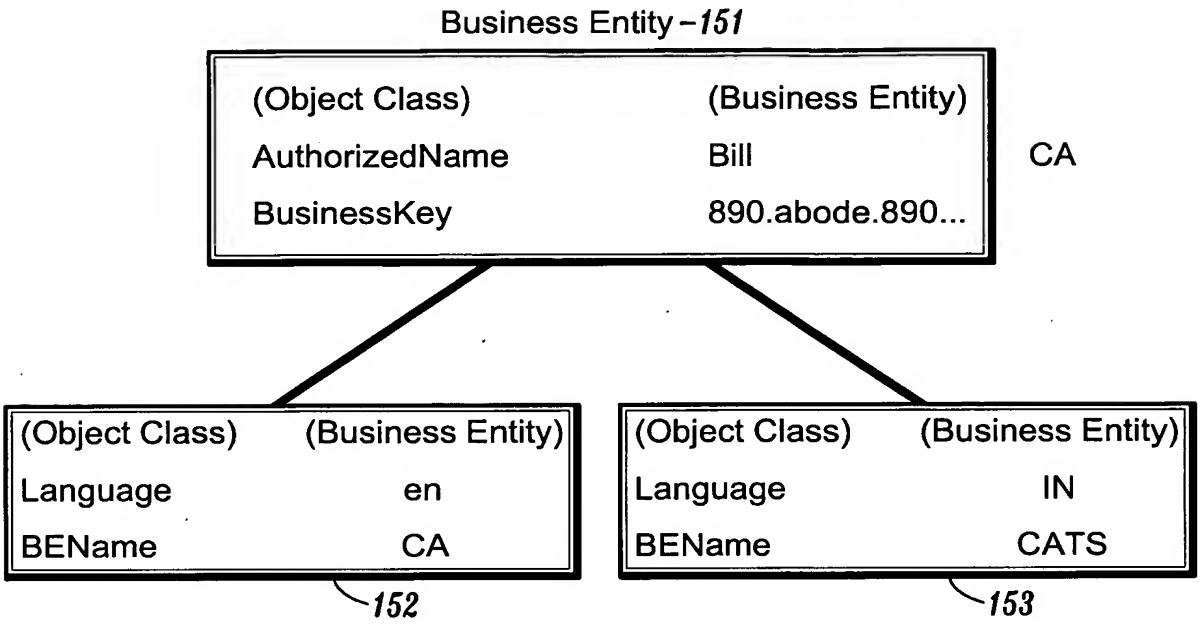



FIG. 15

UDDI Relationship Diagram

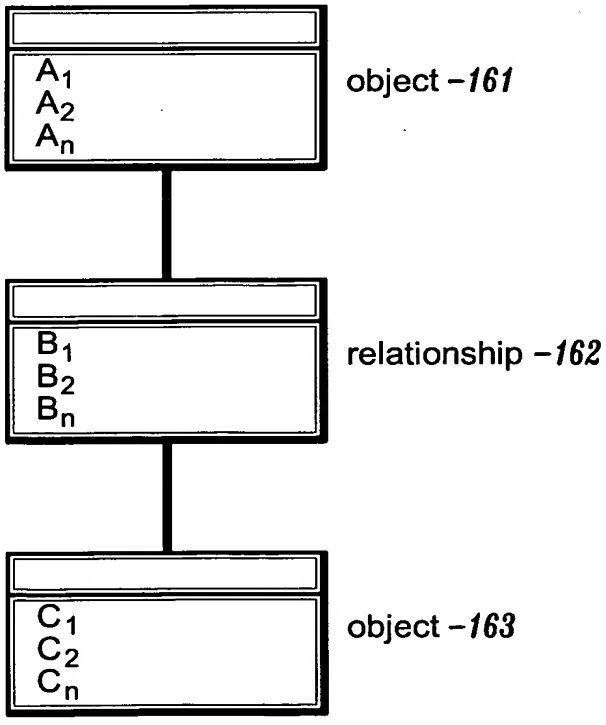



FIG. 16

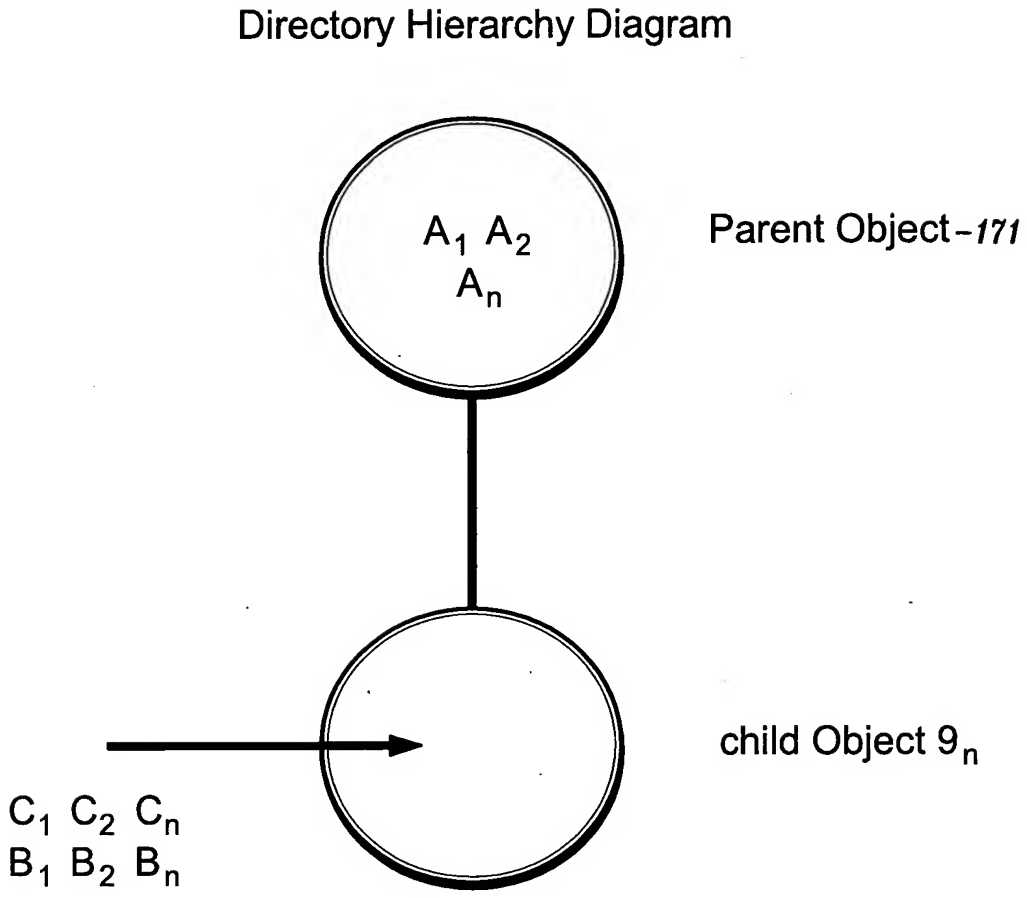

Directory Hierarchy Diagram
A1 A2
An
Parent Object-171
child Object 9n
C1 C2 Cn
B1 B2 Bn

**FIG. 17**

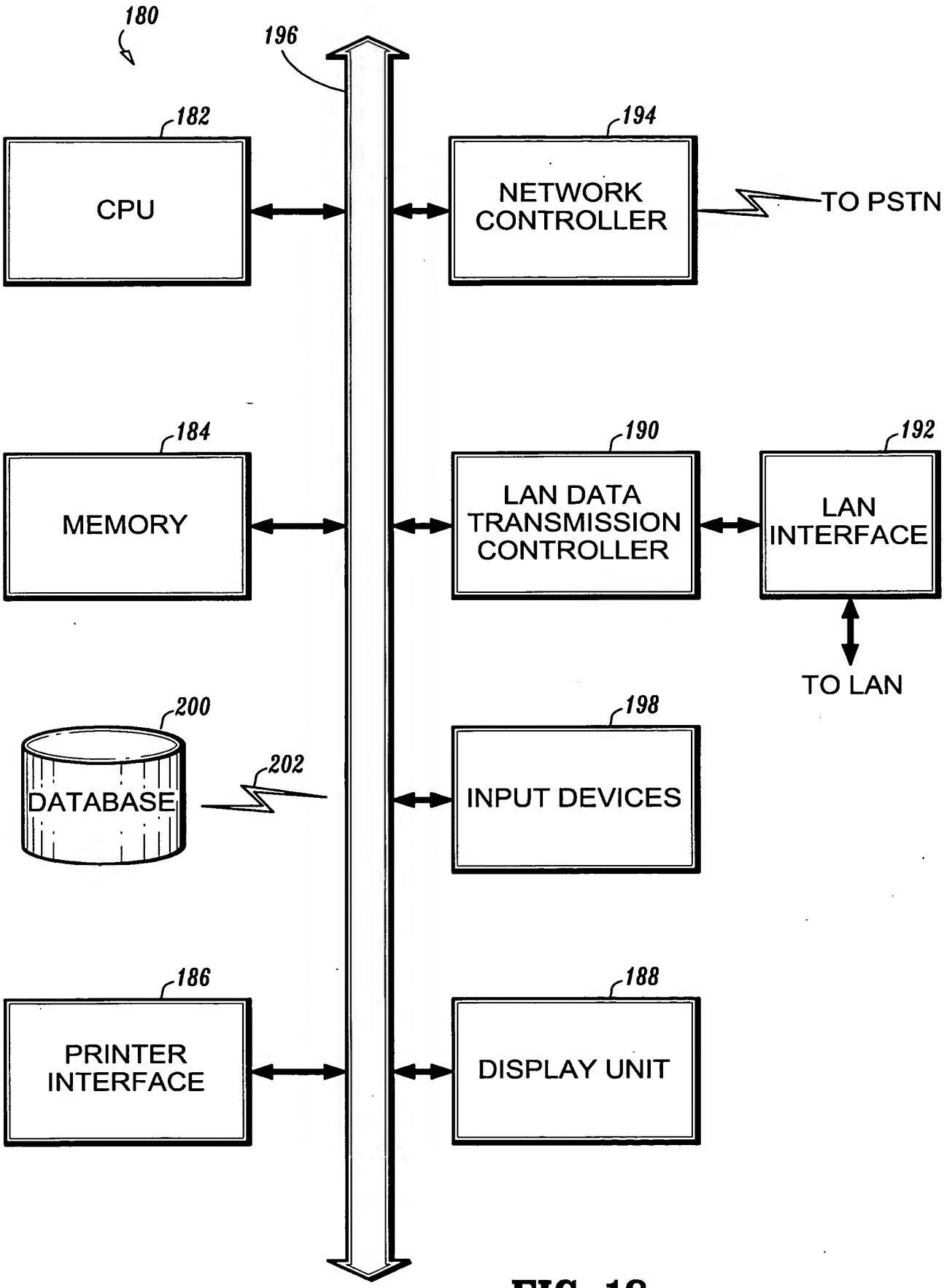

180
196
182
CPU
194
NETWORK CONTROLLER
TO PSTN
184
MEMORY
190
LAN DATA TRANSMISSION CONTROLLER
192
LAN INTERFACE
TO LAN
200
DATABASE
202
198
INPUT DEVICES
186
PRINTER INTERFACE
188
DISPLAY UNIT

FIG. 18